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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,290	06/14/2005	Thomas L. Haschen	4845-0101PUS2	3643
2292	7590	12/07/2005	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			MADSEN, ROBERT A	
			ART UNIT	PAPER NUMBER

1761

DATE MAILED: 12/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/530,290	Applicant(s) HASCHEN, THOMAS L.	
	Examiner Robert Madsen	Art Unit 1761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 37-83 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 37-83 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show "controller 900" as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because the reference numbers described in paragraph 30 are also used to describe

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other features of Figure 1. For example, character "100" has been used to designate both fermentation apparatus in paragraph 30 and distillation apparatus in Figure 1, and "200" has been used to designate both distillation apparatus in paragraph 30 and mixer in Figure 1. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 55-63,78, are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to

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which it pertains, or with which it is most nearly connected, to make and/or use the invention.

5. A “system element” to establish target nutritional values...and a “system element” to determine one or more nutrients... recited in claim 55 are not defined in the specification. Paragraph 30 includes elements but these are in reference to items 100-900 or software/hardware control elements for a temperature controller. There is no disclosure of “system elements” that establish nutritional values or determine nutrients. For examination purposes the language: “means for” will be substituted for “system element to”, since the elements disclosed in the specification apparently do not have the recited capability.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 43, 56, 67,69, 72,81-83 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Regarding claims 43 and 56, these claims are incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the mixer and “off-line”. The claims fail to define what “off-line” means. Off-line from what? There is no suggestion of a “line” in the

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independent claims. For examination purposes, as long as the mixer is not connected to a production line, it will be considered "off-line".

9. Regarding claims 67,69,83,the preamble recites "a method of producing an improved distillers solubles by-product" yet the determining step is completed to "achieve nutritionally enhanced distillers, brewers, or fermenters grain". For examination purposes this determining step is assumed to be for the purpose to "achieve nutritionally enhanced distillers grain".

10. Regarding claim 72, recites "the pre established target nutritional values set forth in the last step of claim 55", but claim 55 is not a method and thus has no "steps" and it does not "set forth" any values. Claim 55 is directed to a system. For examination purposes the reference to claim 55 will be ignored. Furthermore, claim 72 recites the limitation "the mixture" in line 3. There is insufficient antecedent basis for this limitation in the claim. For examination purposes "the mixture" is limited to mean one or more nutrients and wet distillers, brewers or fermenters grains.

11. Regarding claims 81-83, where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term "enhanced nutrient" in claims 81-83 is used by the claim to mean "pH". The accepted meaning of pH is not a nutrient, pH is a measured value. The term is indefinite because the specification does not

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clearly redefine the term. For examination purposes, "pH" will be understood to be an enhanced "value".

12. Furthermore regarding claims 81-83, it is not clear how items (1), (2) and (3) differ, since items (2) and (3) in claims 81-83 are literally identical and item (1) and items (2)/(3) are the same limitation (i.e. the end by-product is the distillers, brewers, and/or fermenters grain). Furthermore it is not clear whether the end product of (4) is different from an "end by-product". For examination purposes, items 1,2, and 3 are viewed as the same limitation and item 4 is assumed to be the "end by-product".

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claims 37-40,52-64,67-69, 76,78,79,81-83 are rejected under 35 U.S.C. 102(b) as being anticipated by Meyer (US 4664905).

15. Regarding claims 37-40,64,67,76,81 Meyer teaches changing the bypass protein level and digestibility of by-product nutrient source mixture of brewer's or distillers grains, which are "the wet end of distillation or fermentation" by-products, as well as soybean meal (Abstract in light of Column 3, lines 21-22). Understanding that the distillers grain is an alternative to soybean meal, Meyer teaches changing the digestibility of distiller grains by adding zinc salts while heating at 200-230°F, a

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degradation temperature, (See Abstract, Column 2, line 55 to Column 3, line 23, Column 4, line 61 to Column 5, line 16, and Examples), wherein the bypass protein level and digestibility are changed to predetermined values by temperature (See the discussion of Example IV, See Column 5, lines 17-46 in light of Column 3, lines 19-31), optionally mixing in an extruder (i.e. if pellets are to be formed (Column 5, lines 13-16) and the mixture is subsequently cooled to less than 200°F (Figure 1 and Column 6, lines 5-20 in light of Column 6, lines 50-62). The enhanced nutrients include rumen degradable protein in the by-product (Abstract in light of Column 3, lines 21-22).

16. Regarding claims 52-55, 60-62, 68, 69, 78, 79, Meyer teaches an element to establish target nutritional values for the brewer/distiller/fermenter grain by-products, (Abstract, Column 2, line 55 to Column 3, line 23, wherein the element is the small ribbon mixer used to establish or pre-establish the standards outlined in Example 1), an injector to inject (the pump in Figure 1 between tank 13 and mixer 12), an element to determine the nutriment amounts (e.g. item 13 of Figure 1), an element to mix the nutrient amounts (item 13 of Figure 1), an element to mix the by-products (item 12 of Figure 1, Column 5, lines 17-46 in light of Column 3, lines 19-31), the mixer is situated before the dryer, which may include heating through an extruder (Column 5, lines 13-16), a dryer to heat and dry that is capable of heating 200-230°F, which is a degradation temperature (item 14 of Figure 1, Column 5, lines 4-12, Column 5, line 57 to Column 6, line 4), and an element for cooling below 200°F (Column 6, lines 5-21).

17. Regarding claim 56, the mixing is off-line from the distillation or fermentation equipment.

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18. Regarding claim 63, the element to pre-establish target nutritional values is the small ribbon mixer and it would be capable of mixing ingredients to achieve any change in nutrient or nutrient amount.

19. Regarding claims 57-59,82,and 83 these limitations merely limit the *method* of using the system *and not* the system itself, and are therefore also anticipated by Meyer.

20. Claims 37-45,47,50,51,55-60,63-67,69-71,73-78,80-83 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Julien (US 5709894).

21. Regarding claim 37-42,47,50,51,64-67,70,71,73-77,80,81, see column 4, line 40 to column 5, line 7 (Note: Julien teaches enhancing wet fermenters grains, as well as distiller's grains) and column 5, line 41 to Column 6, line 37 in light of the example of process steps described in Column 6, line 50 to Column 7, line 15, wherein the mixture nutrient levels, which are desirable are listed in the Tables 1-7 with desired value of minerals inherently taught in Column 11, lines 57-62, and the determined UIP level, amino acid level and digestible protein changes, as well as established levels, are described in Tables 3,5, Column 7, line 19 to Column 9, line 11, and Column 13, lines 53-Column 4, line 24.

22. Regarding claim 43, since Julien does not teach the mixer is part of a production line, it must be an off line mixer (See Examples).

23. Regarding claim 44, Column 5, lines 41-45.

24. Regarding claim 45, see column 7, lines 8-11.

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25. Regarding claims 55-60, 63,69,78,69, 82 and 83, the “system” claims are taught by Julien since Julien teaches method steps that inherently require “elements” or “means for accomplishing” each step (See the sections cited in the rejections of the method claims in paragraphs 20-23). With respect to claim 56 in particular, Julien does not teach the mixer is part of a production line, it must be an off line mixer (Example) and with respect to claims 57-59,82,and 83 in particular, these limitations merely limit the *method* of using the system *and not* the system itself, and are therefore also anticipated by Julien.

26. Claims 52-61,63,68,69,78,79,82,83 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Stuhr (WO 9849903) as evidence by Julien (US 5709894)

27. Regarding claims 52-56,60,61,63,68,69,78,79, See Page 6, lines 8-20, Page 7, lines 11-15,Page 8, line 32 to Page 9, line 17,Page 10, lines 19-29 wherein the system elements or the means to establish target values and the system elements or the means to determine the amounts of ingredients to meet the established target nutritional values is taught by Stuhr with reference to prior art (e.g. Julien '894) that Stuhr intends to improve and has the capability of determining/provide the target values (on Page 2,line 5 to Page 3, line 6).

28. Regarding claims 57-59,82,83, these limitations merely limit the *method* using the system *and not* the system itself, and are therefore also anticipated by Stuhr.

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29. Claim 72 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Julien (US 5709894).

30. Regarding claim 72 in particular, Julien teaches controlling the amount of bypass protein, amino acids, and digestible proteins (column 5, line 41 to Column 6, line 37, Column 7, line 19 to Column 9, line 11). This is accomplished by drying with forced air at 80-900°F, preferably 190-280°F (i.e. includes 218°F), repeatedly, until moisture content of *about* 15% is achieved (Column 6, line 50 to Column 7, line 15). The specification does not define "about 12%", and to select any particular moisture about 15%, such as about 12%, would have been obvious depending on the desired shelf stability (i.e. moisture affects susceptibility to microbial attacks) and desired flow and handling properties (i.e. moisture levels affect flow properties, measured by angle of repose).

Claim Rejections - 35 USC § 103

31. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

32. Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Julien (US 5709894) as applied to Claims 37-45, 47, 50, 51, 55-60, 63-67, 69-71, 73-78, 80-83 above/

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33. Julien teaches the nutrients are added to the wet distiller grains at any stage of during processing (Column 7, lines 9-11), but is silent in adding the nutrients at *both* before and while being dried. However, to select more than one addition step would have been obvious, depending on the amount of material being added and the nutrients sensitivity to excessive drying temperatures/time since Julien teaches adding the nutrients at any stage of during processing, which would include before and while being dried, and adding all the nutrients at once, from a handling perspective, may not be possible depending on the capacity of the dispenser or weighing equipment, or it may be detrimental to expose some products to elevated heat for an extended period of time.

34. Claims 48 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Julien (US 5709894) as applied to Claims 37-45,47,50,51,55-60,63-67,69-71,73-78,80-83 above, further in view of Meyer (US 4664905).

35. Julien teaches the dried nutrient / distillers grains mixture is suitable to be fed directly to a ruminant animal as part of its diet (Column 7, lines 11-15) and after drying in various ways (Column 5, lines 20-22), but is silent in teaching extruding the mixture or applying heat to the mixture while extruding.

36. Meyer also teaches changing the bypass protein level and digestibility of by-product nutrient source mixture of distillers grains for animal feeds by adding a nutrient (Abstract in light of Column 3, lines 21-22). Meyer also teaches drying added nutrients combined with distillers grain in a similar temperature range to Julien, such as 200-230°F (See Abstract, Column 2, line 55 to Column 3, line 23, Column 4, line 61 to

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Column 5, line 16, and Examples). However, Meyer further teaches optionally utilizing an extruder if pellets are to be formed (Column 5, lines 13-16). Therefore, it would have been further been obvious to modify Julien and utilize an extruder with heat, depending the particular physical form of the distillers grain mixture desired since Meyer teach nutrient enriched distiller grains used for animal feeds may be subjected to extrusion if pellets are to be formed, which utilizes heat, and it was well known in the art that conventional animal feeds are available in pellet form.

Conclusion


37. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Reddy et al. (US 5225228) teach adding amino acids to wet distillers grain and drying to provide distillers grains with improve digestibility for humans. Julien (US 6312710 B1) also teaches nutrient enriched distiller and fermenter grains. Smith (US 5219596) teaches distiller and fermenter grains combined with proteins and amino acids to achieve a desired nutrient level. Ethington Jr. (US 6537604 B1) and Ethington Jr., et al. (US 6726941 B2) teaches wet distiller and fermenter grains combined with proteins and amino acids to achieve a desired nutrient level by heating at the same temperature to obtain the same moisture content as Applicant.

38. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Madsen whose telephone number is (571) 272-1402. The examiner can normally be reached on 8:00AM-4:30PM M-F.

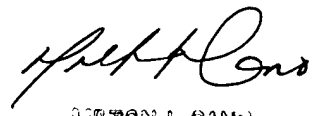
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39. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (571) 272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

40. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Robert Madsen 
Examiner
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